

The Potential Profitability of Poultry Farm: A Case of Mini Poultry Farm Feasibility of TAWI-TAWI Regional Agricultural College: TARAWAKAN Campus

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Abstracts: It was a school-based research project examining the viability of a farm producing Mini-Poultry broilers on the Tawi-Tawi Regional Agricultural College Tarawakan campus. As input costs and point-of-sale prices changed, potential profitability was assessed using sensitivity analysis. This was decided based on the growth rate, survival, and return on investment of the grown chicken. Running down the data using Statistics for Applied Science (SAS) produced a P-value of 0.131927, showing a linear trend with a minor deviation. As the number of chicks rises, profitability generally rises as well, or it stays the same if the quantity is maintained. This practical study boosts the output and incomes of locals who sell live chicken meat. It also continuously contributes to improving local bird production as it creates supplemental feed at its own feed mill using increasingly inventive techniques and primarily local products. As an alternative to expensive feed sold by feed millers, which has a lower "nutrient density" balanced for all nutrients but low energy due to the inclusion of low-energy ingredients like cassava leaf meal, acacia fruit meal, and swam cabbage mixed with commercial broiler diets, the small flocks of poultry are fed on "Domestic but improvised Feed." Due to the increased demand for meat with very small starting flocks that are then sold for growth under the traditional extensive system achieved by better health care, backyard village poultry flock producers are now transitioning into relatively small-scale or mini poultry chicken producers.

Keywords: Potential Profitability, Poultry Farming, Production, TRAC school-base resources.

1. INTRODUCTION

Under the guidelines of animal husbandry, poultry farming is the process of producing eggs or meat for domestic or commercial consumption. It raises domesticated birds for food, including chickens, ducks, turkeys, and geese. In the Philippines, poultry farms mainly breed large numbers of birds. Most Filipino families, especially those in rural regions, raised chickens in their backyards for daily egg production and meat consumption exclusively, without even trying to sell them in large numbers. However, today's poultry farming is a big industry divided into several businesses, such as hatcheries, pullet, and broiler farms for meat production.

In contrast, others focus simply on the production of eggs. More than 70% of the world's chicken meat and 68% of its eggs, according to the World Watch Institute, are farmed intensively. Free-range farming with reduced stocking densities is one option for intensifying the chicken industry. The Tawi-Tawi Regional Agricultural College recently established a research project on poultry production. It will launch its first broiler-only mini-poultry farm at Tarawakan Campus in 2019 under the supervision and management of the production office.

Furthermore, the authors created this project for experimental and demonstration reasons and for animal science majors who intend to undertake research or present personal projects related to the management and production of poultry in the future. This study concentrated on chicken farms in Zamboanga, Philippines, which raised chickens for export. Chickens were grown primarily for human consumption and meat production.

Modern poultry industries are becoming more restrained for poultry goods markets and are still expanding to keep up with global demand. By itself, a poultry farm is becoming a more viable business. According to Dr. M. Farran, in 2009, the value of chicken farms is found in the superiority of the human goods they produce. Meat from broiler farms provides the body with high-quality proteins. Eggs from layer farms are a good source of proteins and vitamins, particularly fat-soluble ones (A, D, E, and K). Poultry farms are quick-moving businesses that can satisfy the need for eggs and meat and can readily expand to handle the rising demand.

Establishing a poultry industry has two primary goals, such as producing eggs and meat, and its performance depends on how specialized and selective it is in these goals. While some poultry farms focus on raising broilers for meat production, others specialize in producing eggs for the market or hatching chicks to generate meat.

Farm owners and their associates must be well-versed in management and husbandry techniques. They use modern technology for all aspects of the poultry industry to be lucrative and ensure that no chicken is wasted in production. Chicken is one of the domesticated animals that is rapidly expanding. Rearing chickens traditionally takes roughly four months to gain at least two kilograms of weight. However, Tawi-Tawi Regional Agricultural College researchers found that a two-kg chicken can only be raised in 42–43 days.

1.1. Objectives of the study

This study was a school-based resource that was only developed in a single mini-poultry farm for broiler production at Tarawakan Campus. It assessed the growth performance of 300 chickens as affected by various feed additives feeding. It looked at the viability of setting up Mini-Poultry broiler farms on the Tawi-Tawi Regional Agricultural College campus in Tarawakan. As input costs and point-of-sale prices changed, potential profitability was assessed using sensitivity analysis. This was decided based on the growth rate, survival, and return on investment of the grown chicken. It was also the goal of this study to review and evaluate additional aspects of raising poultry, such as the health of poultry farms and the use of improvised feed additives in feeding, and to determine what else needs to be done to help establish trustworthy and useful guidelines for more effective use of these improvised feeds as poultry feed.

2. REVIEW OF RELATED LITERATURE

Poultry farms can be divided into two categories: those that produce eggs and meat. Although this study focuses on raising chickens for live meat production, the writers choose to include readings on egg production in the literature for anyone who might want to use this material in the future.

Administration of Poultry Farms

2.1. Production of Meat

Broiler breeders are raised in environmentally controllable poultry houses on poultry farms primarily concerned with producing meat. Fertile eggs are gathered and brought to the hatchery, where they are kept for 18 to 21 days, with the final 3 days of that time being transferred to incubators (Beutler, 2007). The 42-day-old broiler chicks are given to farmers who raise the animals until they are ready for processing and slaughter. These broilers are chickens explicitly kept to produce meat; they are heavier and have a larger bodies than layers (Beutler, 2007).

2.2. Construction of Poultry Farms and Permits

In this instance, preliminary approvals from the relevant planning department were acquired before the building of a chicken farm. According to Wood et al. (1998), approvals assess how poultry farming would affect the environment, including how to avoid or reduce waste, noise, stink, and visual views. Plans should be taken into account when building a chicken farm. For instance, garbage will be produced once the operation begins. Before some specialist company for compost manufacture collects the wastes, construction planning should contain preparations for a remote region to dispose of the trash without posing any health or environmental issues, including risks to water supplies (Wood et al., 1998). Furthermore, poultry farms should be built in a way that allows for future development due to the type of business and growth potential. Plans for drainage improvements, effluent disposal, and feed storage area extension should be included.

2.3. Infrastructure at a poultry farm

Farm facilities connect to the farm's purpose depending on its needs. According to Wood et al. (1998), all chicken farms share a rudimentary infrastructure, including feeders and drinkers. However, some facilities vary based on the farm's objectives. For instance, some farms that produce meat have facilities for a slaughterhouse. These slaughtering facilities are located on a broiler farm to maximize earnings and save costs through vertical integration. If the breeders are raised in cages rather than on the ground, egg production facilities have automated belt systems for egg collection. Hatcheries are furnished with incubators, which keep eggs alive for 18 days, and hatching, which keep eggs alive for three days. Both are kept at the humidity and temperature levels necessary for hatching.

2.4. Waste Management

All kinds of poultry farms should generate trash during their whole operations. Therefore, a care plan must be studied practically before it is implemented. For instance, chickens must always be cleaned and highly sanitized to prevent environmental contamination. Wastes must be contained to a single area and removed as quickly as possible by specialist teams for composting or suitable disposal. Similarly, according to Wood et al. (1998), confinement space can be used for various wastes, including litter from most chicken farms and unhatched eggs from hatcheries.

Another example is poultry litter, a by-product with a profit potential. Litter from the poultry house is mechanically collected after a production cycle in a broiler or egg-producing business. Litter can then be used as fertilizer for crop production. Additionally, trash can be picked up and sold to industrial processors for use in composting processes or nursery preparations. Additionally, it may be composted on a farm in a small space before being spread across agricultural grounds (Wood et al., 1998).

2.5. Feeding

This study adheres to the concerns raised by Dr. M. Farran in his communication in 2009 that feed costs significantly impact the profitability of poultry farm operations, even though it uses its own feeding procedures in proportions that are experimental for the first time in the area. The amount of protein and calories in the diet has an impact on the high cost of feed. Feed costs would rise in an unbalanced diet with an overabundance of protein, raising production expenses. Chickens on low-protein diets could take longer to mature and run the risk of contracting illnesses. Depending on their kind, age, and sex, chickens require various nutrients (feed). Nutritionally balanced diets result in faster-growing, healthier chickens, yielding better products and more profitability.

Similarly, Karcher (2009) stated that extra dietary nutrients are frequently expelled in feces. Feces contain too much nitrogen and phosphorus, which could harm the ecosystem. To protect the environment and lower operational expenses, regulating feed formulas for accuracy is crucial in managing chicken farms.

2.6. Disease Control

Managing the newly introduced flock is undoubtedly one of the most challenging periods of poultry farm management. Almost all poultry farms frequently meet challenges, likely at the beginning of the operation. For the operation to be profitable, a good disease prevention program should be well-planned and ready to prevent any future fatalities. Newly introduced flocks are susceptible to infections. People can spread infections, other birds, recently introduced chicks, or contaminated equipment, according to Mobley and Kahan in 2007. As a result, treating diseases early on is crucial for the operation's success. As soon as the hens are taken out of the poultry house, it needs to be cleaned and sanitized. Different cleansing procedures are used depending on the floor type and style of the chicken house. The poultry house can be cleaned and sanitized using a variety of disinfectants. However, the disinfectant must be carefully chosen to prevent issues with recently introduced flocks (Smith, 1999).

2.7. Vaccination

Vaccination is a solution to lessen the impact of illnesses and prevent losses in a chicken enterprise. Diseases are polluting and are brought on by bacteria, fungi, viruses, mycoplasma, protozoa, and parasites. These include bacteria, fungi, and viruses. Of these, viruses are the leading cause of poultry disease and are thought to pose the greatest threat to poultry farms; however, the spread of these diseases can be prevented through proper farm sanitation, biosecurity precautions, and vaccination of the chicks and chickens.

According to Jacob et al. (1998), viruses can cause several illnesses. The most common are avian encephalomyelitis, Marek's disease, Newcastle disease, infectious bronchitis, laryngotracheitis, and fowl pox. Marek's disease, which can infect laying hens and, ultimately, an entire flock if the eggs are contaminated, is one of the main reasons for vaccination. There are several immunization techniques as a result. Some vaccinations are given through drinking water, while others can be sprayed into the eye or nostril to create antibodies. The chicken's neck can also be injected using an automatic syringe (Jacob et al., 1998). Depending on the vaccine and the disease, vaccinations for chicks are often administered between 2 and 16 weeks of age. Some vaccines are sold as combinations to protect against multiple diseases. In the United States, more vaccination techniques have been developed, such as in-ovo immunization, which has improved labor productivity. This procedure immunizes the embryo in the egg in the hatchery; after that, further immunization on the farm is not necessary (Williams, 2007).

In egg-laying farms and farms that produce meat, "Slaughtering and Processing" is the last stage of the poultry operation. However, the chance of this being feasible did not include the processes of slaughter and processing. This study examines and incorporates additional pertinent information from the literature that is considered crucial for farmers operating chicken farms. The "Wholesome Meat and Fish (Slaughter Houses Act, 2005)" was passed in the USA that mandated that aged chickens on farms that produced eggs be killed when egg production fell. The hen is sold to another farm or, more frequently, it is butchered. All poultry must be brought to a holding area at the slaughterhouse where they are given a decent shelter, enough time to relax, and drink before being killed.

All chickens are shocked before being slaughtered using the appropriate voltage based on the size and weight of the animals. As humanely as feasible, the killing should be followed by 90 seconds of bleeding. To make feather removal easier, hot water heated to 82°C should be accessible. After the feathers are taken off and washed, the bird is eviscerated, and the corpse is divided into parts. To prevent the spread of disease, the knives should be sterilized periodically. The packaging of the chicken carcass happens beside the slaughterhouse after it has been sliced and chilled. Before being sold, packaged chicken flesh is then kept in refrigerators.

Farmers must carefully consider "Budget or capital" when starting a poultry farm. According to Rhodes et al. (2008), beginning a chicken farm requires start-up money and an operations budget. For start-up expenditures, farmers typically need loans from banks or other lenders. The cost to start a chicken farm depends on its size and the infrastructure needed to operate. The number of chicks to be housed determines the typical cost for a chicken broiler house, which varies depending on the design, location, and equipment needed, and excludes the cost of land.

According to Rhodes et al. (2008), depending on the size of the chicken farm, the budget represents the income, fixed & variable costs, profits, and investment amounts. The broiler producer will have a good understanding of the operation and an idea of whether or not it is possible by determining these values and using an enterprise budgeting sheet. The building of chicken houses, the machinery inside the houses, tractors and other equipment, wells and water systems, and site preparation are all included in the start-up costs, representing a considerable investment. The planner must be aware of the details of the farm and the maximum number of flocks/birds that can be generated annually. The producer of broilers can estimate gross income, variable costs, and fixed expenses, which will result in an estimate of net income.

The Tarawakan Campus (TRAC) has an untapped, year-round, abundant water supply that can accommodate human populations that may one day be crammed into sparsely spaced-out farming communities. The influence of any agricultural study in the area will determine the likelihood of economic growth. To develop crops, domesticated

fowl, and animals that cannot be plundered, as well as agricultural infrastructure that cannot be destroyed, researchers, advocates, and instructors at the Tawi-Tawi Regional Agricultural College go above and beyond in their research and investigation. Given its geographic location, the Tarawakan Campus alone can protect agricultural raw materials like seed banks, poultry, and cattle. As a result of the college's agricultural research, there are bushels of upland rice, corn, and other field crops like cassava and groundnuts that are proportionate to the number of flocks.

3. METHODOLOGY

This study employed a tiny piece of a lot at the Tarawakan Campus of Tawi-Tawi Regional Agricultural College to assess the viability of chicken farming. The region has a good history in agriculture. The Mini Poultry is situated in an area with one small stream cutting through the forest and bordering various vegetation types, including Tarawakan and Magsaggaw woods, hilly terraces, shrublands, and inland valley swamps. This vegetation and soil structure is ideal for raising both crops and livestock.

The study, conducted at the Tarawakan Campus with 500 chickens produced in 45 days and fed various levels of feed additives during their development regulation period, began on July and ended on August. These chicks were placed in a chicken house equipped with heaters, feeds, drinkers, and sufficient ventilation. The cost of each chick was \$0.67, which was paid to a local vendor. The \$9,615.38 cost of the poultry house's preparation comprised the cost of the building materials and the laborers engaged. Feeder and drinker costs were calculated independently for each flock.

3.1. Feeding

Age-appropriate feeding for broilers is different. The starter, growth, and finisher feeds have different ingredient percentages. In addition to its beginning feed, this study used the following improvised feed computations. Feed animals with commercial meals combined with acacia fruit meal, chopped-up cabbage, and cassava leaf meal. For chicks between the ages of one and ten days, a starter meal was used. Three sacks of beginning feed, purchased at a fair market price, were used for this study. For chicks between 11 and 28 days, grower feed combined with improvised feed additives was used. As the chicken reached 29 days till marketing, finisher feed combined with improvised feed additives was utilized. The size of the chicks and their growth stage determined the variance in feed volumes, and the conversion varies between the three stages of growth, with broilers in the growth phase ingesting more grower feed than the other feeds.

3.2. Biosecurity Initiative

The management took the following actions while the chickens were in operation: Before the chicks were first placed, the poultry house and cages were thoroughly cleaned and disinfected; the all-in/all-out management was observed, which likely allowed one poultryman to be in one cage while in the poultry house; avoiding unnecessary visitors, delivery trucks/vehicles, and stray animals to stay away from the production area (allowing only farm personnel in the poultry house); and vehicles were not permitted to enter the farm vicinity. Poultry tools and equipment brought to the farm were inspected and sanitized; the poultry area was secured free from other pet birds or farm animals; maintained an effective rodent control program; distributed and supplied water properly and regularly through watering cans; and observed visitors control program to protect chicks from diseases or prevent against inter and intra house contamination.

3.3. Sanitation and Infection

The farm operator cleaned and disinfected the house's water lines, equipment, and floors with a high-pressure washer using a cleaning solution (Lysol or Domex recommended); after washing, the building was allowed to dry before being treated with a disinfectant; the house was then opened and left empty for at least two weeks before the first batch of chicks or flock was placed inside.

3.4. Sanitary Services and Medical Procedures

To prevent contamination, only healthy and thriving birds were raised and allowed to grow; sick birds were

separated from the normal flock and isolated to prevent contamination; chicks of the exact sizes and ages were kept in pens and regularly checked or recorded every week; water was purified and properly decontaminated; sufficient waterers were provided for fresh, cool, and clean drinking water at all times; To prevent cannibalism, the ratio of chicks per cage was kept constant for a short period. Additionally, the farmhouse and surrounding surroundings were kept comfortable and suitable for the chicks, and manures were kept dry to reduce ammonia buildup and the growth of flies.

3.5. Vaccination

Before releasing the newly hatched chicks, vaccines were administered in the hatchery, and vitamins were recommended for the growth regulation period.

3.6. Data Gathering

Data on feed, vaccinations, and chick mortality were gathered daily to keep tabs on the flock. The local market was contacted for information on the price/kg of live chicken meat for each sale, and the information was accurately documented. The average feed price was gathered from the suppliers' owners, who had data for the year, and chicken prices were based on historical data from the local market.

4. RESULTS

Regression analysis was used to support the results' presentation below by doing all computations, analyses, and data interpretation.

4.1. Price of Production

This study examined the viability of setting up a small poultry farm using the conventional way of production. Throughout the project, daily data were kept on the number of daily chick deaths (mortality), vitamins, and flock feed (Table 1). However, meals were created utilizing locally available components deemed growth promoters for the chickens. The cost of buying the chicks and setting up the poultry house for the flock was part of the early start-up expenses for the business.

One chick cost \$0.67. The little poultry house could accommodate 500 chickens. Therefore, the overall cost was \$335.00. Three watchmen were tasked with keeping an eye on the flock in the chicken house. The agreement formed in this study specifies the watchman's salary for a 45-day assignment. Each watchman is given an 8-hour shift to complete his duties in the poultry house.

Table 1. Daily Record of Poultry Farm operated in Tarawakan.

AGE (DAYS)	DEATH	VACCINE VITAMINS	FEED	AGE (DAYS)	DEATH	VACCINE VITAMINS	FEED
1	0	Vitamins	Starter	23	1		Grower
2	0		Starter	24	0		Grower
3	4		Starter	25	0		Grower
4	0		Starter	26	0		Grower
5	0		Starter	27	0		Grower
6	0	Vitamins	Starter	28	0	Vitamins	Grower
7	0		Starter	29	0		Finisher
8	2		Starter	30	0		Finisher
9	0		Starter	31	0		Finisher
10	0		Starter	32	0		Finisher
11	0		Starter	33	0		Finisher
12	0	Vitamins	Starter	34	0		Finisher
13	0		Grower	35	0	Vitamins	Finisher
14	1		Grower	36	0		Finisher
				37	0		Finisher

The main expenses associated with operating a broiler farm are listed in Table 2. Although the price per chick was \$0.67, depending on the market, it might range from \$0.58 to \$0.87. For the length of the project, four vitamins totaling \$38.48 were used. Although the expense of vitamins had little impact on the project's potential to be profitable, their use can prevent the farm from suffering substantial losses due to sickness since it gives the health and strength of the chicks.

Table 2. Cash Flow for the Mini Poultry of TRAC in Tarawakan Campus representing Major Cost, Income and Net Profit.

PARTICULAR	ITEM/QUANTITY	COST OF FLOCK
Cost of Chicks	\$0.67/chick x 500pcs.	\$335.00
Vaccine/vitamins	Vitracin 1	\$9.62
	Vitracin 2	\$9.62
	Vitracin 3	\$9.62
	Vitracin 4	\$9.62
	Total cost of Vitamin	\$38.48
Feed and Feeding Cost	Starter (2sacks at \$42.79/sack)	\$85.58
	Grower (8sacks at \$22.12/sack)	\$176.96
	Finisher (8sacks at \$34.71/sack)	\$277.68
	Total Feeds and Feeding Cost	\$540.22
Cleaning and Sanitation	Wage of caretaker (3persons @ \$76.92 each)	\$230.76
	Electricity Cost (Gen. Set Fuel)	\$192.31
	Total Cost of Cleaning and Sanitation	\$423.07

Total Cost Expenses		\$1,336.77
INCOME		
Sales of live chicken	Weight of live meat produced was 450kilogra @ \$4.33/kg	\$1,948.50
Net Income		\$611.73

4.2. Cash Flow for the Tarawakan Campus Mini Poultry of TRAC showing Major Cost, Income, and Net Profit

a. Feeding costs were the most considerable expense in this chicken company since there was a high possibility of incurring fees. Even with the addition of improvised feed additives to the estimated diets, the operation's feed still differed according to chick age. Each feed variety had a unique ratio of ingredients, which impacted both the feed price and the hens' health. Starter feed was the most expensive per sack due to its high protein content. In contrast, the improvised feed additives were provided as a supplement to grower feed, utilized in the largest quantity, and constituted the highest feed cost. Feed for the project costs a total of \$540.22.

b. Cleaning and sanitation are two critical phases in a small-scale poultry operation. The flock was taken out, and the chicken house was cleaned. For a package price of \$76.92 for one surgery, a laborer was hired for one day. After cleaning, a disinfectant was sprayed inside the poultry house to get rid of bacteria before being taken outside to sun dry for three weeks. The price of the sanitary supplies, including the salaries of the three hired watchmen and electricity (genset fuel), came to \$423.07. Other equipment, such as a cleaning brush machine, was not used in this chicken farm since it would have increased costs. The least expensive method was using a hand spade to remove waste. Cleaning was handled by the worker caring for the flock, and labor costs comprised the overall labor cost shown in table 2.

c. Income - The study's live poultry meat was sold on a kilogram basis. The flock produced 450 kg of live meat, with a per-kg cost of \$4.33. Thus, 450 kg of poultry meat were sold, earning \$1,948.50. The net profit was \$611.73 after deducting the expenses of \$1,336.77 from the total sales. Therefore, the micro poultry operation was both viable and lucrative, given the constraints of this study.

Table 3. Sensitivity Analysis Examining the Effect of Anticipated Fluctuation Cost and Prices.

PARTICULAR	Current operation	Phase-2 (Predicted cost)	Phase-3 (Predicted cost)	Phase-4 (Predicted cost)	Critical-case scenario (Basis for Avoidance)
Number of broilers	\$9.62	\$9.62	\$9.62	\$9.62	\$9.62
Cost per chick	\$0.67	\$0.80	\$0.87	\$0.87	\$0.67
Cost per flock	\$335.00	\$384.62	\$432.69	\$432.69	\$335.00
Fixed labor cost for Caretakers	\$230.76	\$153.85	\$153.85	\$153.85	\$153.85
Total vaccination and vitamins	\$38.48	\$38.48	\$38.48	\$38.48	\$38.48
Total feed cost	\$540.22	\$565.65	\$594.21	\$621.22	\$540.22
Total cleaning and sanitation cost	\$134.62	\$134.62	\$134.62	\$134.62	\$134.62
Electricity cost	\$134.62	\$134.62	\$134.62	\$134.62	\$134.62
Price per kilogram of live meat	\$4.33	\$4.33	\$3.85	\$3.46	\$2.88
Sales	\$2,163.46	\$2,163.46	\$1,923.08	\$1,730.77	\$1,442.31
Net profit	\$748.27	\$751.65	\$434.73	\$215.32	\$104.04

Note: Phases 2, 3, 4, and the worse scenario are the predictable cost and prices due to fluctuation using sensitivity analysis. This serves reference for the future poultry farm operation of the college to avoid failure.

4.3. Critical Analysis

Sensitivity analysis was utilized in this study to evaluate future cost and revenue trends and profitability under high-cost conditions. If the cost/flock increased to \$432.69, the net profit would decline if the price/chick reached its maximum of \$0.87/chick. Therefore, even though net revenue would decrease when chick prices rose, the business would still profit if other expenses remained the same. The overall feed cost would increase if feed prices rose steadily by 5% above the current rates. Sales would total \$1,730.77. The net profit would be \$215.32, which is still a profit—assuming a consistent price per live chick of \$3.46 (Table 3).

If expenditures stay the same and the price per kilogram of live beef remains at its maximum of \$4.33/kg, then net sales will be \$2,163.46, and the net profit will be \$751.65. The cost per flock would be \$335.00 in the worst-case scenario when the cost/chick is at its maximum of \$0.87, the feed cost is 20% higher than usual, and the price per kilogram of meat is at its lowest at \$2.88/kg. There would be \$1,442.31 in total sales. The net profit would be \$104.04, which is a decreasing operation after deducting costs from sales.

Many owners of chicken farms anticipate unpredictable costs and extraordinarily high meat prices. Costs could be decreased with good management, boosting the company's profitability. Additionally, profitability tends to rise as the number of chicks increases or to stay the same if the quantity is maintained.

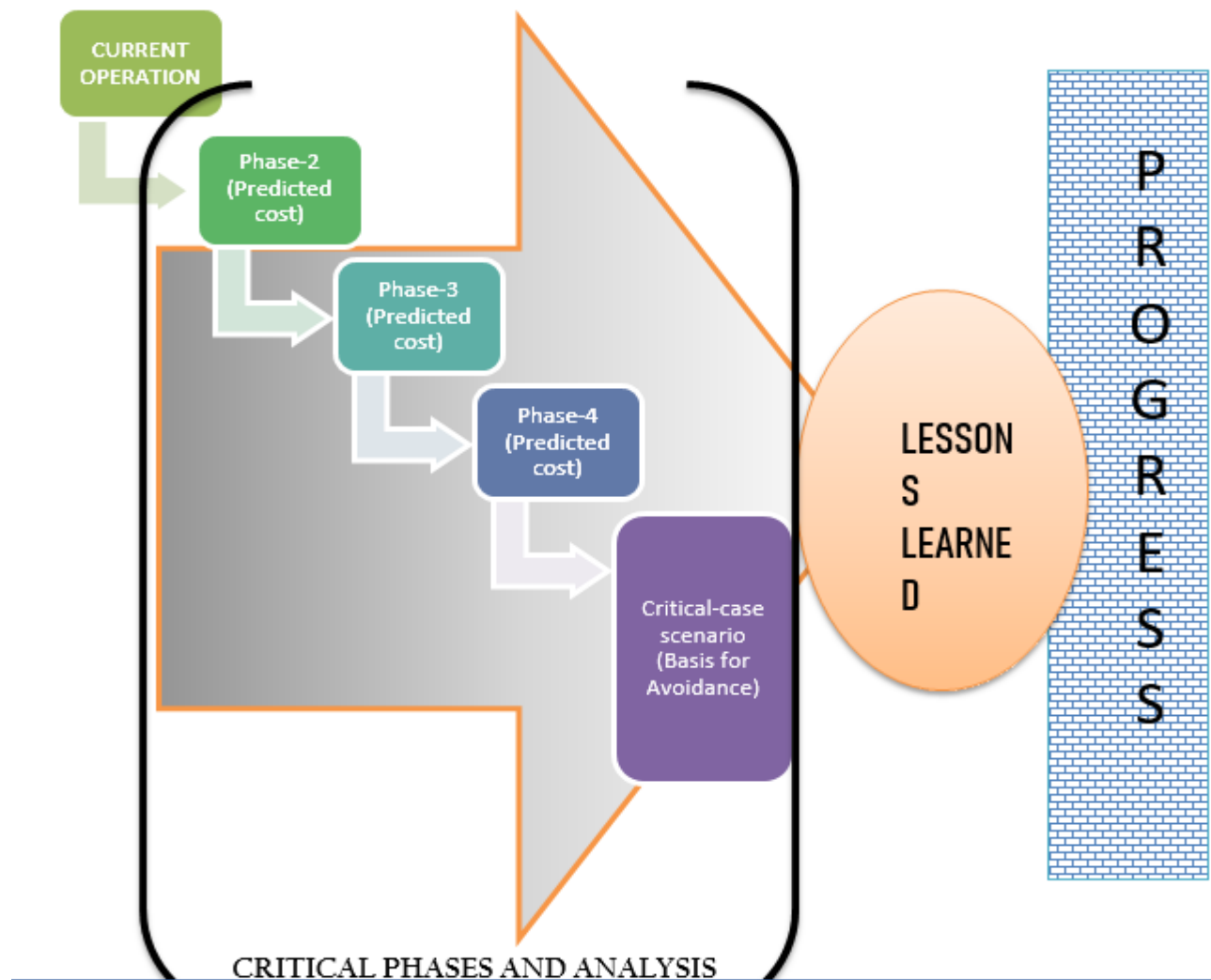


Figure 1. Puhagan's Model (Predictive/Sensitive Analysis).

The Model Explains The Progress In The Operation Of Mini Poultry Through Predicted Costs Analysis Where Phase 1-Is The Current Operation, Phase 2 Is A Predicted Cost Where The Cost Per Chick Increases And The Price Per Kilogram Of Live Meat Remains Constant, Phase 3 And Phase 4 Where The Cost Of Chick Increases 5% Respectively From The Original Cost And The Prices In Kilograms Decreases, While The Critical Case Scenario Where The Cost Per Chick Rollback To Its Original Price But The Price Per Kilogram Of Live Meat Terribly Decreasing, This Phase Is The Basis For Avoidance.

5. DISCUSSION

Data were run down using Statistics for Applied Science (SAS), and the following outcome was obtained: The regression analysis results showed a P-value of 0.131927 higher than the alpha (0.05) value, indicating a tiny deviation from a linear trend. The history of the price per kilogram of meat revealed a linear trend. Regression analysis was done to support this theory, and the results showed that a linear regression forecasting model was suitable for the given data set. The P-value for this model was 1.22×10^{-3} , which is substantially lower than the significance level (0.05). Simple calculations were used to do sensitivity analysis utilizing the peak market prices for each of the three phases (Total Sales – Total Costs). Sensitivity analysis was computed independently for each step and the worst-case scenario for each of the three components.

Costs could be decreased with good management, boosting the company's profitability. Additionally, profitability tends to rise as the number of chicks increases or to stay the same if the quantity is maintained. This project has been effective in its present endeavors and has aided in increasing the output and earnings of local farmers who raise live chickens for meat. It also continuously contributes to improving local bird production as it creates supplemental feed at its own feed mill using increasingly inventive techniques and primarily local products. It constantly helps farmers raise and sell their growing birds. The process involved feeding the small flocks of poultry "Domestic but improvised Feed," a cheaper alternative to expensive feed sold by feed millers. This feed was balanced for all nutrients and had a low energy content because it contained low-energy ingredients like cassava leaf meal, acacia fruit meal, and swam cabbage mixed with commercial broiler diets. It was expected that local villagers who adopted this technology would be able to enhance the percentage of meat in their products. Due to the high demand for meat with very small starting flocks that are then sold for growth under the traditional extensive system, some backyard village poultry flock producers are now evolving into relatively small-scale or mini poultry chicken producers. This was only possible by improving health care in the traditional small-scale or Mini Poultry with the least mortality percentage.

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